

AMENDMENTS TO THE CLAIMS

1. – 54. (Cancelled)

55. (Currently amended) In a [A] method for generating a an improved composition of contiguous overlapping peptide fragments (COPs) for a selected polypeptide allergen the improvement comprising carrying out the steps of:

- (1) determining candidate contiguous overlapping peptides by a method comprising:
 - (a) conducting a computerized structural analysis of the selected polypeptide allergen to identify alpha helix, beta sheet and cysteine bridge three-dimensional structural formations;
 - (b) selecting one or more separation sites within the sequence of the polypeptide allergen to provide candidate contiguous overlapping peptide fragments greater than from 30 to 90 peptides in length which are linear and which peptides overlap each separation site wherein said COPs present all potential T-cell epitopes but interrupt alpha helix and beta-sheet structural motifs involved in IgE binding; and
- (2) producing said candidate contiguous overlapping peptide fragments; and
- (3) screening said candidate COPs by the steps of:
 - (a) selecting COPs characterized by having a T cell stimulating activity for T cells specific for the selected polypeptide allergen which is greater than a selected minimum by contacting said COPs with T cells specific for the selected polypeptide allergen and detecting said T cell stimulating activity; and

(b) selecting COPs characterized by having an IgE binding activity for IgEs reactive with the selected polypeptide allergen which is less than a selected maximum by contacting said COPs with IgEs reactive with said selected polypeptide allergen and detecting said IgE binding activity either *in vitro* or *in vivo* by skin reaction test.

56. (Previously presented) The method of claim 55 in which the COPs have relatively reduced levels of IgE binding activity but conserved T cell stimulating activities relative to the IgE binding and T cell stimulating activities of the allergen.

57. (Previously presented) The method of claim 55 wherein the peptides overlap each separation site by 10 to 15 amino acid residues.

58. (Previously presented) The method of claim 55 wherein said COPs have a T cell stimulating index which is greater than 2.

59. (Previously presented) The method of claim 55 wherein said COPs are useful in inducing tolerance to said polypeptide allergen.

60. (Previously presented) The method of claim 59 wherein the COPs are useful in desensitization immunotherapy.

61. (Previously presented) The method of claim 55 in which the IgE binding activity *in vitro* is measured by immunoblotting.

62. (Previously presented) The method of claim 61 wherein the immunoblot is a dot blot.

63. (Previously presented) The method of claim 55 wherein the IgE binding activity is measured *in vivo* by skin reaction on a dermal test.
64. (Previously presented) The method of claim 63 wherein the dermal test is selected from the group consisting of skin prick tests and intradermal tests.
65. (Previously presented) The method of claim 64 wherein the dermal test is an immediate intradermal (ID) test wherein COPs are selected which have a wheal and flare reaction less than or equal to 5 mm at a peptide concentration of greater than 0.1 $\mu\text{g/ml}$.
66. – 70. (Cancelled).